California Electronic Network for Transportation Research

Harnessing the research efforts of California transportation specialists

California faces the challenging transportation problems of traffic congestion and vehicle pollution. At the same time, the state is home to world-class resources for their solution. An obstacle exists, however, in harnessing together the research and development activities performed by multiple organizations such as universities, industry, and government agencies. We have the capability to provide a unifying mechanism: The California Electronic Network for Transportation Research (CENTR). This high-speed, high-capacity data network will enable the latest transportation research results to be shared almost instantaneously as well as provide quick access to vast knowledge in documents and on data bases throughout the state and the world.

CENTR exploits rapidly developing communications and computing technology, permitting a wide variety of computer systems to access transportation data bases and advanced simulation capabilities. Researchers throughout the state will view high-resolution images on screens at their desktops. Video teleconferencing enables meetings to be convened from multiple locations with minimal travel and expense. Electronic-mail services will provide quick and easy access to informational bulletin boards and communications links to others working in the field.

CAPABILITIES

- *Promote innovation and rapid commercialization of advanced transportation technologies*
- *Augment, rather than duplicate, existing transportation research and development network activities*
- *Accessibility for everyone involved in California transportation research efforts*

Need for coordination

The California state legislature has demanded that transportation planning, facility utilization, and research and development activities be better coordinated. Public hearings have identified several problems:

- Ineffective coordination that depends too heavily on word of mouth or written reports
- Building new or duplicate facilities or tools (such as models and simulations) rather than improving existing ones
- Omission of certain key state research and innovative talent, especially in small businesses and the national laboratories.

CENTR benefits

CENTR will provide a real-time communication tool with which the various industry, academic, and government partners of a coordinated state-wide effort can better and more quickly address transportation issues. Through CENTR these partners can be kept abreast of current events and have access to or add to the latest data bases or analytical methodologies developed by others. CENTR will avoid duplication of effort, promote synergism among research activities around the state, and assist in executing research and development and implementing desirable results. Examples of early demonstration phases could involve linking all Partners for Advanced Transit and Highways (PATH) activities, application to the large Intelligent Vehicle Highway Systems (IVHS) test beds being developed by the University of California and California State Colleges, Federal Highway Administration IVHS field operational tests, and traffic data bases.

Leading CENTR development

We propose to lead a team of industrial contractors to define system user requirements, design CENTR, direct its implementation, and serve as its operational manager. We have substantial experience in all aspects of the relevant technologies and have demonstrated capability with numerous systems that have long records of high performance.

Contact

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